

Brown and Caldwell

Carson City, Nevada

BORING LOG

Project Name: OU4 Phase 1 - Yerington Mine Evaporation Ponds

Project Number: 136742

Soil Boring: ☒

Monitoring Well: ☐

Piezometer: ☐

Boring/Well Name: OU4-LEP-03

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Boring Location: OU4 Lined Evaporation Ponds		Northing: 1556409.14	Easting: 322294.79
Drilling Contractor: WDC		Top of PVC Elevation: Ground Surface Elevation: 4349.13 feet amsl	
Drilling Equipment: Geoprobe		Date Started: 10-06-08	Date Finished: 10-06-08
Drilling Method: Direct-Push		Completed Depth: 30 ft bgs	Water Depth: 21 ft bgs
WELL CONSTRUCTION			
Sampling Method: Continuous Core		Driller: Rick Smedley	
Well Seal: N/A		Borehole Diameter: 2"	
Logged By: P. Bassett		Drilling Fluid: N/A	
		Type and Diameter of Well Casing: N/A	
		Slot Size: N/A	Filter Material: Cement grout

Depth (ft)	Elevation (famsl)	USCS Group Symbol	Material Description	Sample Type I Name	Sample Type I Location	Sample Type II Name	Sample Type II Location	Lithology	Remarks
		ML-GW	GRAVEL with sand and silt (VLT Roadway) / SILT (Pond Sediments) (0 - 4) VLT from road/causeway mixed with pond sediment and some windblown (?) soil. In general, the silty pond sediments were dry, yellow and become saturated with depth; the VLT Subbase was classified as a gravel with sand and silt and was saturated (3/4"-minus crushed rock).						<p>Description of drilled cuttings based on ASTM Method D-2488 (the visual-manual procedure), grain-size determinations and nomenclature based on the Unified Soil Classification System.</p> <p>Horizontal Survey data is expressed in the Nevada State Plane system, Nevada West zone, in feet.</p> <p>Sharp contacts indicated by solid lines, gradational contacts indicated by dashed line.</p> <p>All depths are below land surface unless stated otherwise.</p> <p>Type 1 Samples are representative of geochemical and geotechnical soil samples as well as groundwater samples.</p> <p>Type 2 Samples are representative of meteoric water mobility soil samples.</p>
4345		GW	GRAVEL with sand and silt (VLT Subbase) (4 - 5) Overlaid by thin, asphalt liner. Some gypsum crystals visible below the pond liner. Saturated.						
5		ML	SILT with clay (Native Soil) (5 - 14) Moist, brown, dense. Sticky silt that is mouldable and plastic. Sample: <u>OU4-LEP-03A-SC</u> from 5-8 feet. Sample: <u>OU4-LEP-03A-SG</u> from 8-10 feet. Sample: <u>OU4-LEP-03A-MW</u> from 5-15 feet. Composite sample from 3 boreholes spaced 6 inches apart.	OU4-LEP-03A-SC					
4340				OU4-LEP-03A-SG					
10						OU4-LEP-03A-MW			
4335		SM	Silty SAND (14 - 18) Well graded, fine-grained sand.						

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Depth (ft)	Elevation (famsl)	USCS Group Symbol	Material Description	Sample Type I Name	Sample Type I Location	Sample Type II Name	Sample Type II Location	Lithology	Remarks
			Sample: <u>OU4-LEP-03B-SC</u> from 15-18 feet. Sample: <u>OU4-LEP-03B-SG</u> from 18-20 feet.						
				OU4-LEP-03B-SC					
		CL	silty CLAY (18 - 21)						
	4330			OU4-LEP-03B-SG					
20									
		SP	SAND (21 - 25) Poorly graded, coarse-grained sand. Saturated at 21 feet. Sample: <u>OU4-LEP-03-GW</u> from 22-26 feet. Groundwater grab sample from hydropunch screen.						
	4325			OU4-LEP-03-GW					
25		SM	Silty SAND (25 - 28) Fine-grained sand.						
		ML	SILT with clay (28 - 30) Dense and sticky.						
	4320								
30			Bottom of Borehole at 30 feet below ground surface.						